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## United States Patent [19]

Grim et al.

4,378,793

4.454.871

4,572,169 11/1985

4,620,698 11/1986

4,624,247 11/1986

4,771,768 9/1988

4.825.856 5/1989

4,960,115 10/1990

4/1983

6/1984

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5,078,128

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[54]	REMOVABLE LEG WALKER	
[75]	Inventors	Tracy E. Grim, Broken Arrow, Okla.; Thomas A. Kasper, Agoura Hills, Calif.
[73]	Assignee:	Royce Medical Company, Westlake Village, Calif.
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[56]		References Cited
U.S. PATENT DOCUMENTS		
	3,032,033 5, 3,701,349 10, 3,760,056 9, 3,955,565 5, 4,057,056 11, 4,265,033 5,	1973 Rudy 128/90 X   1976 Johnson, Jr. 128/83.5   1977 Payton 128/83.5

Mauldin .

Mauldin et al. ..... 128/80 H

Mann et al. ..... 128/90 X

Reed et al. ..... 606/54 X

Ford ...... 128/80 C

Crispin ...... 128/88

Nelson ..... 128/80 H

4,974,583 12/1990 Freitas ...... 128/87 R X Primary Examiner—Robert Bahr

Assistant Examiner-J. Doyle

Attorney, Agent, or Firm-Poms, Smith, Lande & Rose

## **ABSTRACT**

An improved, lightweight and removable leg walker is provided for stabilizing and rapidly healing lower leg injuries of a patient. The injured limb is disposed in a removable inner ankle bootie whose interior is partially covered with inflatable support bladders. While the foot is secured within the booties, it is then inserted into and additionally supported by a removable soft goods-type support. The soft goods-type support is securely attached to a walker frame by a combination of strap fasteners with Velcro attachments. Inflatable bladders are located along the inner surfaces of two strut bases and raised heel strip. A tongue portion of the soft goods-type support also includes an inflatable bladder which provides additional support to the injured limb. These inflatable bladders encourage proper circulation from the lower leg to the heart. The walker frame comprises a pair of strut bases and struts in order to prevent inversion and eversion of the ankle. The full length sole portion of the walker is novelly constructed of two halves joined together. This construction is structurally superior to other walkers and braces insofar as it costs less and weighs less than other walkers currently manufactured. The heel portion of the sole also is constructed to form a cantilever spring, shock absorbing element.

## 91 Claims, 6 Drawing Sheets

